

REMARKS

Claims 38-50, 74, and 75 are now pending in the application. By this paper, Claims 74 and 75 have been added added. Support for these new claims can be found throughout the specification, claims, and drawings originally filed. No new matter has been added. The following remarks are believed to be fully responsive to the outstanding Office Action and are believed to place the application in condition for allowance. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 38-47 and 49-50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharood, et al. (U.S. Pat. No. 6,453,687) in view of Wiggs (U.S. Pat. No. 4,463,571) and Gromala et al. (U.S. Pat. No. 5,533,349).

Claim 48 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharood in view of Wiggs and Gromala as applied to Claim 38 above, and in further view of Katsuki (U.S. Pat. No. 6,158,230).

These rejections are respectfully traversed.

Applicants respectfully submit that there is no teaching, suggestion, or motivation to modify the retrofit plug of Sharood to include the diagnostic monitoring system of Wiggs and that such a combination would render the device of Sharood inoperable for its intended purpose.

Sharood fails to teach or suggest monitoring a motor protector of a compressor. Rather, Sharood discloses a retrofit plug (2650) that monitors a run time of a

compressor of a refrigeration appliance (2600) to determine if a refrigerator door of the refrigeration appliance (2600) has been left open. See Sharood at Col. 27, Ins. 59-65. Specifically, Sharood discloses that if a compressor associated with the refrigeration appliance (2600) “is on longer than expected” and a temperature within a refrigerated compartment of the refrigeration appliance (2600) rises, a door-open condition may be detected. See Sharood at Col. 27, Ins. 59-65.

Sharood also discloses several other features, none of which are associated with whether a compressor motor protector has tripped. For example, the retrofit plug (2650) may be used to alert a user of a power failure, dial a repair service to repair the refrigerated appliance (2600), monitor a temperature of the refrigerated compartment, provide an estimation of how long until food spoilage occurs (i.e., for food disposed within the refrigerated compartment), and provide diagnostic information to aid in repair of the refrigerated appliance (2600). See Sharood at Col. 27, In. 42 to Col. 28, In. 64.

While Sharood describes alerting a remote location of a potential problem with the refrigeration appliance (2600) such as a power failure or a rising temperature within the refrigerated space, Sharood does not describe actively protecting the compressor or refrigeration appliance (2600) by restricting power to a compressor—using a motor protector, for example—to prevent operation of the compressor and refrigeration appliance (2600) during unfavorable conditions. Accordingly, Sharood fails to teach or suggest a motor protector per se.

Wiggs discloses an electrical monitoring system that monitors a high-pressure switch (22) and a low-temperature switch (36) to distinguish between a high-pressure condition and a low-temperature condition when servicing a compressor (10) associated

with a heat pump system. See Wiggs at Col. 3, Ins. 19-35, Ins. 41-52. and Col. 4, Ins. 4-12. The high-pressure switch (22) and low-temperature switch (36) respectively provide a signal to the electrical monitoring system when either a high-pressure condition or a high-temperature condition is detected, thereby causing the electrical monitoring system to activate a lock-out relay (54, 64, respectively) and terminate current to a compressor motor. See Wiggs at Col. 1, Ins. 64-68, Col. 2, Ins. 1-31, and Col. 4, Ins. 3-25 and 58-64. The source of the signal (i.e., the high-pressure switch (22) and low-temperature switch (36)) is identified by which relay (54, 64) is activated, thereby identifying the particular fault to a serviceperson. See Wiggs at Col. 1, Ins. 64-68, Col. 2, Ins. 1-31, and Col. 4, Ins. 3-25 and 58-64.

Sharood disclose that the retrofit plug (2650) may be used to detect a door open condition of a refrigeration appliance (2600). But providing the retrofit plug (2650) with the ability to monitor high and low pressure switches of a compressor would not enhance the ability of Sharood's retrofit plug (2650) to detect the door open condition because the retrofit plug (2650) bases its determination of a door-open condition on a run time of a compressor. Because Sharood fails to teach or suggest monitoring switches associated with a compressor, and only suggest monitoring a compressor run time to detect a door-open condition of a refrigeration appliance (2600), Applicants respectfully submit there is no suggestion or motivation to provide the retrofit plug (2650) of Sharood with the ability to monitor switches associated with a compressor.

Applicants submit that there is no suggestion or motivation to combine the teachings of Sharood with Wiggs as such a combination would render the device of Sharood inoperable for its intended purpose. As noted in MPEP § 2143.01(V), "[I]f

proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” See MPEP § 2143.01(V) citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Sharood discloses that if the compressor (10) is on longer than expected and a rising temperature in a refrigeration compartment (2610) of the refrigeration appliance (2600) is detected, the retrofit plug (2650) may detect a door-open condition. See Sharood at Col. 27, Ins. 59-65. But modifying the retrofit plug (2650) of Sharood with the teachings of Wiggs such that the retrofit plug (2650) of Sharood is able to monitor a high-pressure switch and a low-temperature switch associated with a compressor would defeat the ability of the retrofit plug (2650) to determine how long the compressor (10) has been operating, an intended feature of Sharood’s retrofit plug (2650).

More specifically, the switches (22, 36) of Wiggs are either in an open position, preventing operation of the compressor (10), or in a closed position, permitting operation of the compressor (10). See Wiggs at Col. 3, Ins. 22-29 and Ins. 44-53. Only in the open position can we be certain whether the compressor is operating (it is not). In the closed position, the compressor will only operate if there is a demand for cooling. Thus, monitoring how long either switch (22, 36) is in the open position or the closed position cannot be used to determine a compressor run time, and therefore cannot predict whether a refrigerator door is open.

Monitoring the switches (22, 36) may indicate that operation of the compressor (10) is *permitted*, but not that the compressor (10) has been running for that same period of time. Thus, modification of Sharood by Wiggs to monitor a switch associated

with a compressor being open or closed does not indicate compressor run time and therefore renders the Sharood device inoperable for its intended purpose of detecting a door-open condition. Accordingly, Applicants respectfully submit that there is no suggestion or motivation or any other technical basis to combine the teachings of Sharood with Wiggs.

As discussed above, modifying the retrofit plug (2650) of Sharood, as suggested by the Examiner, renders the device of Sharood inoperable for its intended purpose. Therefore, Applicants respectfully submit that there is no reasonable expectation of success in providing the retrofit plug (2650) of Sharood with the ability to monitor a switch such as the high-pressure switch (22) and the low-temperature switch (36) disclosed by Wiggs.

Because the modification of Sharood and Wiggs renders the device of Sharood inoperable for its intended purpose, Applicants submit that further combining Sharood and Wiggs with Gromala results in a device that operates contrary to the teachings of Sharood.

Accordingly, Applicants respectfully submit that independent Claim 38, as well as Claims 39-50, dependent therefrom, are in condition for allowance. Accordingly, reconsideration and withdrawal of the rejections is respectfully requested.

NEW CLAIMS

New Claims 74 and 75 are added for consideration. Because new Claims 74 and 75 depend from independent Claim 38, which is believed to be in condition for

allowance in light of the foregoing remarks, Claims 74 and 75 are similarly believed to be in condition for allowance.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: Oct 19 2006

By: 

Michael Malinzak
Reg. No. 43,770
Matthew H. Szalach
Reg. No. 53,665

HARNES, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

MM/MHS/cà